

PILE SPLICE OR BUILD-UP

-½" FULL EPOXY COMPOUND JOINT. PAYMENT INCIDENTAL TO RESPECTIVE PILE ITEM.

PLACE EPOXY GROUT TO FILL HOLE WHEN DOWELS ARE IN PLACE.

- GASKET OR FORM TO RETAIN EPOXY (TYP.) PAYMENT INCIDENTAL TO RESPECTIVE PILE ITEM.

PILE SIZE	STRANDS	DOWELS
'A'	'B'	'C'
12"	6	4
14"	8	4
16"	10	6
18"	12	8
20"	16	8
24"	24	12

PRECAST PRESTRESSED CONCRETE PILE SIZES

PROJECT SPECIFIC PILE NOTES

- 1. PILE TYPE:
- THIS PROJECT WILL UTILIZE _ " x _ " PRESTRESSED-PRECAST CONCRETE PILES.

 2. ESTIMATED PRODUCTION PILE LENGTH IS '.
- 3. REQUIRED TEST PILE LENGTH IS _'LONGER THAN THE ESTIMATED PRODUCTION PILE
- 4. DRIVE PILES TO A BEARING RESISTANCE OF ___KIPS USING A RESISTANCE FACTOR OF
- MINIMUM TIP ELEVATION WILL NOT BE REQUIRED FOR THIS PROJECT OF REFER TO THE PILE INSTALLATION DATA TABLE FOR MINIMUM TIP ELEVATION.
- DESIGN ASSUMPTIONS: THE PRESTRESSED CONCRETE PILES WERE DESIGNED FOR (NORMAL EXPOSURE or SEVERE CORROSIVE CONDITIONS).

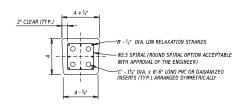
GENERAL PILE NOTES

- FOR MORE INFORMATION REGARDING PILE DRIVING, INSTALLATION, MATERIALS, AND FABRICATION, REFER TO SECTION 605 DRIVEN PILES OF THE STANDARD SPECIEL ATIONS
- (A) DRIVE TEST PILES AT EACH LOCATION SHOWN ON THE PLANS. PRODUCTION PILES WILL BE ORDERED BASED ON THE RESULTS OF THE TEST PILE DRIVING.

(B) ORDER SAME LENGTH FOR ALL PILES (I.e. WITHOUT A LONGER TEST PILE). TEST PILES, AS NOTED, WILL BE DRIVEN FIRST TO ESTABLISH DRIVING CRITERIA FOR THE OTHER PILES IN EACH SUBSTRUCTURE ELEMENT. AN ADDITIONAL HAS BEEN ADDED TO THE DESIGN LENGTH OF EACH PILE AS A CONTINGENCY.

PRESTRESSED-PRECAST CONCRETE PILE NOTES

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 PROTECT ALL REINFORCING STEEL WITH FUSION BONDED EPOXY.
- 2. EPOXY GROUT FOR GROUTING THE DONEL BARS IN THE TOP OF THE PRESTRESSED-PRECAST CONCRETE PILE MUST BE AN APPROVED NON-SHRINK EPOXY GROUT SPECIFICALLY DESIGNED AS A FAST SETTING COMPOUND THAT POURS EASILY TO FILL THE VOIDS. THE COST OF GROUTING THE DONEL BARS IS INCIDENTAL TO THE RESPECTIVE PILE.
- 3. THE CONTRACTOR MAY CONSIDER USING ALTERNATIVE PILE BUILD-UP DETAILS FOR BOTH DRIVING AND WITHOUT DRIVING. SUBMIT ALTERNATIVE DETAILS FOR PILE BUILD-UPS TO THE DEPARTMENT FOR APPROVAL.
- THE CONTRACTOR MAY CONSIDER USING ALTERNATIVE SPLICE JOINT DETAIL. SUBMIT ALTERNATIVE DETAILS FOR SPLICE JOINT TO THE DEPARTMENT FOR APPROVAL.



TYPICAL PRECAST PILE SECTION

PILE INSTALLATION DATA								
CURCTRUCTURE	DESIGN DATA		ACTUAL FIELD DATA					
SUBSTRUCTURE	MINIMUM TIP	ESTIMATED PILE	ACTUAL MINIMUM	ACTUAL AVERAGE	ACTUAL MAXIMUM			
UNIT	ELEVATION	TIP ELEVATION	TIP ELEVATION	TIP ELEVATION	TIP ELEVATION			

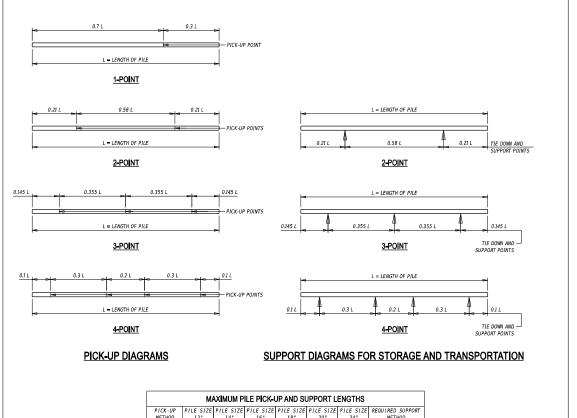


SPLICE JOINT DETAIL

PRECAST CONCRETE PILE FROM INITIAL DRIVE

FLAT SURFACE ON BOTTOM, NO CHAMFER.

REMOVE ANY CONCRETE DAMAGED DURING INITIAL DRIVE. FILL WITH EPOXY UP TO 3" DEPTH LARGER DAMAGED AREAS SHALL BE CUT OFF



MAXIMUM PILE PICK-UP AND SUPPORT LENGTHS								
PICK-UP	PILE SIZE	REQUIRED SUPPORT						
METHOD	12"	14"	16"	18"	20"	24"	METHOD	
1-POINT	62'	67'	70'	73'	79'	88'	2, 3, OR 4-POINT	
2-POINT	88'	94'	99'	103'	112'	125'	2, 3, OR 4-POINT	
3-P01NT	126'	135'	142'	148'	160'	179'	3 OR 4-POINT	
4-POINT	177'	189'	199'	207'	225'	250'	4-POINT	

NOTE:

1. THE PICK-UP DIAGRAMS, SUPPORT DIAGRAMS FOR STORAGE AND TRANSPORTATION, AND THE 'MAXIMUM PILE PICK-UP AND SUPPORT LENGTHS' TABLE ARE FOR INFORMATION PURPOSES ONLY AND SHOULD NOT BE INCLUDED ON THE PLAN SET.

2. THE 'MAXIMUM PILE PICK-UP AND SUPPORT LENGTHS' TABLE IS BASED ON THE COMPRESSIVE STRENGTH (f'ci) AT THE TIME OF INITIAL RELEASE AT 4800 osi.

3. THE DESIGNER MUST CONSIDER THE POSSIBILITY THAT THE CONTRACTOR WILL POSITION PILE INTO PLACE FOR DRIVING USING THE OWE-POINT PICK-UP WETHOD. THEREFORE IT IS RECOMMENDED THAT THE PILE LENGTH BE LIMITED TO THE MAXIMUM LENGTH FOR THE OWE-POINT PICK-UP METHOD.

DESIGNER NOTES

- 1. 'PROJECT SPECIFIC PILE NOTES', 'GENERAL PILE NOTES', AND 'PRESTRESSED-PRECAST CONCRETE PILE
 NOTES' ARE REQUIRED TO BE SHOWN ON THE PLAN SETS.
- 2. UNDER 'PROJECT SPECIFIC PILE NOTES', NOTE 2, THE ESTIMATED PRODUCTION PILE LENGTH SHOULD BE EQUAL TO THE ESTIMATED DESIGN PILE LENGTH IF 'GENERAL PILE NOTES', NOTE 2(A) IS USED. IF 'GENERAL PILE NOTES', NOTE 2(B) IS USED, THEN THE ESTIMATED PRODUCTION PILE LENGTH SHOULD BE FOULAL TO THE ESTIMATED DESIGN PILE LENGTH + 5°-0".
- 3. UNDER "PROJECT SPECIFIC PILE NOTES", NOTE 3, THE REQUIRED TEST PILE LENGTH SHOULD BE 10"-0" LONGER THAN THE ESTIMATED PRODUCTION PILE LENGTH IF "GENERAL PILE NOTES", NOTE 2(A) IS USED. IF "GENERAL PILE NOTES", NOTE 2(B) IS USED. THEN THE REQUIRED TEST PILE LENGTH SHOULD BE EQUAL TO THE ESTIMATED PRODUCTION PILE LENGTH + 5"-0".
- 4. UNDER 'GENERAL PILE NOTES', NOTE 2, THE DESIGNER MUST CHOOSE BETWEEN 2(A) AND 2(B) AND DELETE THE NOTE CONTAINING THE METHOD NOT USED FOR THE PROJECT, METHOD 2(A) SHOULD BE USED IF THERE IS SUPPLICIENT THE FOR THE CONTRACTOR TO ORDER PRODUCTION PILES BASED ON TEST PILE RESULTS. THIS TYPICALLY APPLIES ONLY TO LAGGER-SIZED PROJECTS OR WHEN PILE DRIVING IS NOT THE CRITICAL PATH METHOD 2(B) IS MORE COMMON DUE TO TIME CONSTRAINTS IN THE CONSTRUCTION SCHEDULE AND THEREFORE IS USED FOR MAJORITY OF DELDOT PROJECTS.
- 5. AS PER SECTION 612 PRECAST CONCRETE OF THE STANDARD SPECIFICATIONS, UNLESS OTHERWISE NOTED ON THE PLANS, THE 29-DAY COMPRESSIVE STRENGTH (PC) OF THE PRESTRESSED-PRECAST CONCRETE PILE IS ASSUMED TO BE 6000 psi WITH A COMPRESSIVE STRENGTH (PCI) AT THE TIME
- 6. THE IPILE INSTALLATION DATA TABLE SHOULD BE USED FOR ALL PROJECTS. IF MINIMUM TIP ELEVATION IS NOT REQUIRED FOR THE PROJECT, THE DESIGNER SHOULD SIMPLY PLACE "NA" UNDER THE "MINIMUM TIP ELEVATION" COLUMN. THE "ACTUAL FIELD DATA" INFORMATION SHOULD BE FILLED OUT BY THE FIELD INSPECTOR AND INCLUDED IN THE AS-BUILT DRAWINGS.
- 7. THE DESIGNER MUST EVALUATE THE STRUCTURAL CAPACITY OF THE PILE FOR ANTICIPATED DRIVING CONDITIONS AND WHEN STRENGTH I LOADS ARE APPLIED TO THE PILES AS PART OF PILE SIZING SELECTION
- 8. THE PILE BUILD-UP AND SPLICE JOINT DETAILS AS SHOWN ON SHEET 1 ARE RECOMMENDED. THE CONTRACTOR SHOULD BE ENCOURAGED TO SUBURI ALTERNATIVE DETAILS IF SUCH DETAILS REDUCES CONSTRUCTION TIME AND/OR THE TOTAL CONSTBUCTION COSTS.
- 9. THE DESIGNER MUST DETERMINE WHETHER THE PILE BE CLASSIFIED AS 'FREE HEAD' OR 'FIXED HEAD'.
- (a)STANDARD DELDOT PRACTICE REQUIRES THE TOP OF PILE TO PROJECT A MINIMUM OF 12° INTO THE PILE CAP AFTER ALL DAMAGED MATERIAL HAS BEEN REMOVED WHILE MEETING REQUIRED QUANTITY OF DOWLES 'C'. IN THE TABLE PROVIDED ON SHEET 1, PILES MEETING THESE MINIMUM REQUIREMENTS WILL BE CONSIDERED AS 'FREE HEAD'.
- (b) FOR A PILE TO BE CLASSIFIED AS "FIXED HEAD", THE PILE MUST MEET ALL THE REQUIREMENTS AS SPECIFIED IN 9(a) WITH EXCEPTION THAT TOP OF PILE MUST PROJECT INTO THE PILE CAP A MINIMUM OF 2*PILE DIA AFTER ALL DAMAGEO MATERIAL HAVE BEEN REMOVED.
- 10.FOR PILE BENTS, THE DESIGNER MUST DETERMINE THE POINT OF FIXITY AS PER A10.7.3.13 AND SECTION 107.5.4 DURTHERMORE, THE DESIGNER MUST CONSIDER THE SLENDERNESS RATIO WHEN SELECTING THE PILE SIZE FOR BOTH PRODUCTION AND TEST PILES.
- 11 REFER TO SECTION 107.3.4.1 FOR MORE INFORMATION ON PRESTRESSED PRECAST CONCRETE PILES.
- 12.FOR CERTAIN TYPES OF CONSTRUCTION SUCH AS ACCELERATED BRIDGE CONSTRUCTION WITH PRECAST CONCRETE SUBSTRUCTURES, CONSIDER ADDING A NEW NOTE UNDER 'PROJECT SPECIFIC PILE NOTES' ASSIGNING A VALUE OF LESS THAN 3 INCHES SPECIFIED IN SECTION 605.3.4.B.9 OF STANDARD SPECIFICATIONS FOR MAXIMUM ALLOWABLE VARBIATION AT THE TOP OF THE PILE IN ANY DIRECTION FROM THE LOCATION SHOWN IN THE CONTRACT DOCUMENTS.